trees now under cultivation are monœcious, the tree perhaps adapting itself to the enforced solitude of its new abode in gardens. However, it appears at present to be both monœcious and diœcious, like several other Coniferæ.

In the grounds at Beaufort Castle, near Inverness, are several specimens of this Araucaria, producing only male or pollen-bearing catkins. One, a particularly fine tree, has borne such pendent cones for several years past. Last week I had the opportunity of inspecting a rather famous Araucaria at Conan, the seat of Sir Kenneth Mackenzie. This is said to be one of the first three specimens introduced into Scotland; the other two at Edinburgh were, I believe, killed by the severe winter of 1860. The tree at Conan has lost all its lower branches, and has grown but little of late years; it, however, yearly produces the erect ovule-bearing cones, and about twelve years ago, these contained fertile seed. Specimens grown from the seed of that year are still thriving at Gairloch, on the north-west coast of Scotland. No fertile seeds have been produced since; and as there was no other specimen certainly within several miles that could have produced the necessary pollen, we must conclude in the absence of direct evidence that this is a diœcious tree, and produced the more insignificant male catkins on the one occasion only. I therefore need hardly point out that unless the Araucaria at Inveraray is also provided with male flowers, or some other specimen similarly provided grows in the neighbourhood, the Duke of Argyll may assuredly expect his lawn to be strewn next year with only empty seed-vessels.

In answer to Mr. Gardiner, I may remark that I could detect no difference in habit or foliage between the diœcious male tree at Beaufort and the monœcious one at Conan; the latter, however, is so much damaged as to render comparison difficult.

Adrian Weld-Blundell.

The Abbey, Fort Augustus, November 30.

Your correspondent, Mr. A. D. Webster, in your issue of November 20 (p. 57), states that the male catkins of the above tree are extremely rare as compared with the fruiting cones. If this is the case, though my own observations would have led me to the contrary opinion—the following instances may be of interest. I have observed the male catkins on a tree in the cemetery of this town for two or three successive years, in considerable quantities. In the grounds at The Elms, Houghton, Hunts., there is a tree which for several years past has borne large quantities of the male "amenta," giving to it, as your correspondent describes, a very striking appearance. Another tree in the same grounds has this year produced a single specimen of the same nature, while a third, of the opposite sex, is also developing a fruiting cone, which will doubtless, in the near proximity of the pollen-bearing ones, perfect its seeds.

Among specimens of the male catkins that I possess from the latter place is one which is "double," the floral axis being bifid. It has occurred to me that this may be some slight indication as to the much-vexed question of the morphology of the "amenta," whether each consists of a series of *monandrous* flowers or constitutes a single *polyandrous* one; the above monstrosity seeming to point towards the former, as the bifurcation of the axis of an *inflorescence* is a common phenomenon, that of a single *flower* being, on the contrary, much rarer.

I am not sure whether I should be right in generalizing from the comparatively few fruiting examples I have seen, but in the cases which have come under my observation the female trees have been more distantly branched than the male, where the ramification is considerably closer and more luxuriant.

Northampton, December 3. H. N. Dixon.

### Dry-rot Fungus.

The "beautiful growth of fungus covering the wall and floor (in a wine-cellar) to a depth of 4 inches, suggesting cotton-wool in form and colour," referred to by "M. H. M.," is the destructive dry-rot (*Merulius lacrymans*), and I would advise your correspondent to make war upon it without delay. The cotton-wool form is an early stage of the fungus. If neglected, it will in a few months develop a leathery sheet, sending out tough leathery cords a quarter of an inch thick, with spore-bearing folds of a rusty colour. These spores will scatter themselves all over the cellar, and will be difficult to eradicate. The mycelium of the fungus buries itself in any kind of wood, especially deal, runs rapidly down the longitudinal fibres, and, as it goes, destroys the "nature" of the wood, so that it snaps and crumbles under the slightest pressure. I have had to deal with this pest in a range of cellars with a timber roof, and have found the best remedy to be repeated applications of corrosive sublimate dissolved in methylated spirit freely painted on the timber, walls, or floor, wherever the "cotton-wool" makes its appearance. I had to cut away 8 feet in length of a 10-inch Memel beam which was permeated by the mycelium, and rotten to the core. Between the end of this beam and the back of the recess in the brick wall in which it rested was a vacant space filled with the mature fungus full of spores. This was two years ago. I have been fighting the fungus ever since with the corrosive sublimate, and have nearly exterminated it. The first appearance of the cotton-wool should be attacked without delay. F. T. Mott.

Birstal Hill, Leicester.

### The Effect of Fog on Plants.

As my name appears somewhat prominently in your note on the important inquiry into the effect of fog on plants, may I explain that the experimental investigation of the subject from a botanical point of view is entirely in the able hands of my friend, Dr. Oliver?

I am prepared, as stated in the Scientific Committee's circular, to examine any specimens of plants affected by fog which may be sent to me, but my share in the work does not go beyond this.

The inquiry is of very great interest, both to horticulturalists and botanists, and I am glad that it has been noticed in the columns of Nature. D. H. Scott.

Royal College of Science, South Kensington,
London, S.W., December 6.

### Great Waterfalls.

Would you allow me to supplement my inquiries published in last week's Nature (p. 105) by asking for a description of the Pambam-arivy Falls in India, of which I have only the following brief note:—"In the Travancore Hills between Tinevelly and Travancore is situate the magnificent Pambam-arivy, or Snake Fall. It is a double fall, descending in the first plunge from the cliff edge 1200 feet, and it can be seen from a distance of forty miles." Arthur G. Guillemard.

Eltham, Kent, December 9.

### A Band of Light.

The account of the so-called comet that was seen by Mr. Eddie at Grahamstown (see Nature, November 27, p. 89) reminds me of the phenomenon seen some years ago in this country during an auroral display. A band of light, in shape somewhat resembling a comet, was seen to move across the sky, rising in the north-east and disappearing in the north-west; it moved, however, much faster than the comet-like body lately observed, being in sight, as far as I remember, only one or two minutes. C. C.

Trinity College, Cambridge.

### Some Habits of the Spider.

In default of any other it may be worth while to call to mind the following record of the habit of certain spiders, alluded to by "A. S. E.":—"He saw great spiders with crowns and crosses marked on their backs, who sat in the middle of their webs, and when they saw Tom coming, shook them so fast that they became invisible" (Kingsley, "Water Babies," p. 40).

W. E. H.

## BOTANICAL ENTERPRISE IN THE WEST INDIES.

During the last twelve years considerable effort has been made to enlarge the sphere of action of the botanical organizations in the West Indies. At the beginning of the period there were only two botanical establishments in this part of the world, one at Jamaica and the other at Trinidad. Since that time an important botanical garden has been successfully

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established at British Guiana, and lately a scheme of botanical stations has been put forth to suit the circumstances of the smaller islands, described in these columns (vol. xxxv. pp. 248–250). This scheme of botanical stations for the West Indies has been very carefully and assiduously fostered at Kew, and it appears now as if it were likely to be fully carried out. It was felt that the smaller islands under present circumstances could not support any considerable organization of their own, but, on the other hand, if they joined together and affiliated their stations to one or other of the larger gardens there were good grounds for believing that satisfactory results would be attained.

Stations have been already established at Grenada, St. Vincent, St. Lucia, Barbados, and Antigua, while others are in course of being established at Dominica, and St. Kitts, and Nevis. The curators of these stations are carefully trained men (mostly from Kew), whose chief qualification is a thorough knowledge of horticultural methods as applied to tropical plants. They devote themselves to the maintenance of the stations as centres for the growth and distribution of economic plants, and they carry on experiments with the view of improving old or introducing new industries. It may readily be gathered that the objects of these stations are thus of a very simple and unassuming character. They necessarily work within narrow limits. They cannot give much attention to plants of a purely decorative character, or, again, to the maintenance of large areas under cultivation as pleasure grounds. The main object in view is to meet the special circumstances of the West Indies at the present time, and do all that is possible to encourage a diversified system of cultural industries so that they may not suffer so much as hitherto from fluctuations of prices in the chief staples.

It is believed that the Botanical station scheme will eventually meet the wants of each island in a simple and economical manner. It will become the basis of a federation for purely economic purposes likely to be generally beneficial both to the European planter and the Negro small proprietor. The stations will, it is hoped, have the occasional supervision of the heads of the Botanical Departments at Jamaica and Trinidad, and they will draw from thence such supplies of seeds and plants as may be required from time to time for their special wants.

In the organization of the scheme successive Secretaries of State for the Colonies have taken a warm interest, while the elaboration of the details has necessarily to a large extent fallen upon Kew. As the scheme took root, the discussion of these details involved a rather heavy burden of correspondence. It was eventually felt to be advisable both by the West Indian Governments immediately concerned and by the Colonial Office, that one of the Kew Staff should proceed to the West Indies in order to advise on the spot as to the various questions incidental to the successful start of the various stations. The mission was accordingly intrusted to the Assistant-Director, Mr. Morris, who has had a considerable experience of planting industries both in the Old World and in the New. Mr. Morris left by the mail of November 12, and will be absent about three months.

## *NOTES.*

MR. W. F. R. WELDON, F.R.S., has been appointed by the Council of University College, London, to the Jodrell Professorship of Comparative Anatomy and Zoology, which was held for sixteen years by Prof. Ray Lankester. Mr. Weldon is a Fellow of St. John's College, Cambridge, and is a lecturer on Invertebrate Morphology to the University of Cambridge.

THE Council of the Royal Geographical Society has agreed to grant £200 to Mr. Theodore Bent to aid him in exploring the now famous ruins in Mashonaland.

ACCORDING to the *Colonies and India*, the important post of Superintendent General of Education in the Cape Colony will fall vacant at the end of the present year, owing to the retirement, after 30 years' service, of Sir Langham Dale, K.C.M.G. This gentleman was in 1848 selected by Sir John Herschel to be Professor of Classics in the South African College, Cape Town, and in 1859 was appointed to the office which he now holds. He also became Vice-Chancellor of the University of the Cape of Good Hope in 1873. The value of the appointment is £1000 per annum.

THE Whitworth Trustees have added to their gifts to Manchester 12½ acres of land, known as the Stanley Grove Estate, purchased by them for £27,000, for a hospital under the direction of the Owens College. The site is alongside the Whitworth Park.

ACCORDING to the will of the late Sir Edwin Chadwick, a trust fund is to be applied as the trustees shall direct for the advancement of sanitary science. By a codicil to his will, the testator suggests that the trustees may offer a cup of the value of £20 to be given annually, for a term of years, to sanitary authorities at home or abroad showing the greatest reduction in the death-rate of the population in their district. He suggests also the offer of a silver medal to the school teacher showing the best mental results of the half-time principle, and a gold medal for district school managers obtaining the best results in subjects named.

LAST week we referred, in a leading article, to a Conference convened by the National Association for the Promotion of Technical and Secondary Education for the purpose of considering the best means of utilizing the new fund placed at the disposal of County Councils under the Local Taxation Act of this year for the promotion of education. The Conference met on Friday, December 5, and was largely attended. Lord Hartington, who occupied the chair, opened the proceedings with a short speech, in which he urged that the best way of securing the fund will be to see that it is used for the purpose for which it was originally granted, by stimulating existing institutions in the work they are now doing, by adding a scientific and practical side to schools, and providing new schools where such do not now exist. There are, he pointed out, many ways in which the grant can be applied, and it is clear that one cut-and-dried system cannot be applied throughout the country. The system in urban districts must be different from that established in agricultural districts. The secretaries presented a report on the working of the Technical Instruction Act and the Local Taxation Act; and afterwards there was a most careful discussion of all aspects of the question which the Conference had met to consider. No formal motions were adopted, as several members of the Conference felt that they could not commit their County Councils to definite resolutions. In the course of the discussion Sir W. Hart Dyke assured the Association of his willingness in every possible way to co-operate with them. Mr. Mundella said the best result of the meeting would be if it insured the continuance of the grant in the channel in which they wished it to go. If this money was not promptly utilized for education, it might revert to the Treasury. No doubt embarrassment might be felt in some localities, but he would recommend in such case that the money should be placed in a suspense account, which the Act enabled them to do. The total absence of provision for intermediate education had been a grave defect in our system. Wales had appropriated the whole fund, and stood higher in respect of intermediate education than any other part of the country.

THE Second International Ornithological Congress will be held at Buda-Pesth in May 1891. The Hungarian Committee nvite all specialists and members of Ornithological Societies to

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